Orkar man arbeta efter 65? – en presentation av studier av hälsan hos äldre i arbetslivet och effekten av att gå i pension

Hugo Westerlund, Ph.D.

• Stress Research Institute, Stockholm University (Division of Epidemiology)
• Department of Psychology, Stockholm University (Division of Work and Organizational Psychology)
• Department of Clinical Neuroscience, Karolinska Institutet (Division of Insurance Medicine)
• Department of Epidemiology & Public Health, University College London (UCL)

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Background

- Population ageing in the whole Western world
  - substantially increased longevity
  - low nativity
- The workforce is also ageing
- Decreasing proportion of the population working
  - young people start working late
  - increasing number of retirees
  - many do not work until statutory retirement age
- Fewer people have to support more
  - at the same time as the demands on living standards and (often costly) health care increase
Longevity by sex in Sweden 1960-2009 and prognosis 2010-2060


Källa: SCB

Sveriges officiella statistik
Burden of support in Sweden 1960-2009 and prognosis 2010-2060:


Källa: SCB

Sveriges officiella statistik
Stages in the second half of life

• Later working life
  – different ages in different occupations (cf. figure skater, pilot, politician)
  – the career "ends" ("the summit" often 10 years prior to retirement)
  – planning for life in retirement

• Retirement
  – some choice of time point for many
  – abrupt or gradual

• The Third Age
  – new concept, an between working life and old age
  – good health and good finances
  – postponed dreams of "The Good Life"

• Old old age, traditionally seen as something negative
  – failing health
  – poverty, dependency
Older workers

• Ageing affects work capacity
  – decreased capacity in some respects
  – increased prevalence of chronic disease
  – changed (possibly decreased) motivation to work
  – improvements in some abilities also in advanced age (wisdom)
  – increased heterogeneity with increased age

• Cohort effects
  – people in a certain age group share some experiences
  – sometimes ”dated” skills (e.g. lacking IT skills)
  – expectations formed by a different labour market (e.g. of permanent posts)
  – older people of tomorrow not like those of today – a different cohort

• Attitudes towards older people
  – stereotypes and ignorance
  – an idea that older should leave their place for younger people

• Attitudes towards retirement
  – a right (cf. protests in Greece and France)
Is retirement beneficial or harmful?

- There is a limit to how long people can work
- Retirement could harm the individual’s health through
  - poverty
    - less of a problem in welfare states
  - life loses its meaning
    - alienation, anxiety and depression?
    - myocardial infarction and suicide?
  - work is health, so retirement must surely be bad for you?
- Retirement can also be beneficial through
  - liberation from stress and dangerous work
  - rest and recuperation
  - time for meaningful and healthy activities

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Earlier research

• Mixed results
  – disability pension associated with poor health
  – involuntary retirement negative according to some studies
  – old age pension – contradictory results

• Large methodological problems
  – difficult separate the effect of retirement from the effect of ageing
    • the older, the more likely a person is to have health problems
  – major selection effects
    • many forced to retire when health fails
    • the most healthy with the best jobs often continue (choose to) working
Self-rated health before and after retirement in France (GAZEL): a cohort study


DOI:10.1016/S0140-6736(09)61570-1
The GAZEL cohort

- Employees of France's national gas and electricity company
- A large and diversified population
  - wide socio-economic and job positions range
  - very stable with high upward mobility and good social security
- The medical department database
  - demographic, socioeconomic, and occupational data
  - a register of sickness absences, accidents, permanent disabilities, compensated diseases, causes of death, cancer
- Accurate data on retirement
  - Virtually no loss to follow-up
- In 1989, a cohort of 20,625 volunteers was established
- Annual follow-up surveys 1989 onwards (still ongoing)
  - lifestyle, self-reported health conditions, and social environment

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Number of employees retiring in the Gazel cohort by year of retirement

18,884 (92%) retired by 2007.

Of them, all 14,104 participants with ≥1 returned questionnaire before and after retirement, and who had not retired on health grounds (n=610), were selected for the study.
Retirement age among those who did not retire for health reasons

Of those who did not retire due to illness, 10,216 (72%) retired between 53 and 57 years of age, and 13,846 (98%) between the ages of 50 and 60 – at 64 all had retired.
Method

• Study based on the GAZEL cohort
  – 14,714 persons in the analytic sample
• Yearly measurements from a 15-year time window centred on retirement
  – from year -7 through +7
• Self-rated health
  – 8-point Likert scale, dichotomised according to the literature
  – 174,765 person-measurement observations
• Repeated measurements logistic regression with generalised estimating equations (GEE)
  – takes account of intra-individual correlations (ARIMA)
  – not sensitive to missing data
Why is retirement a relief?

• Is work physically and mentally taxing?
  – normal ageing limits certain capacities
  – the prevalence of chronic illnesses increases with age
  – modern working life often demands peak performance
  – age discrimination an added stressor

• Do people experience their health as poor when they feel they cannot perform optimally at work?

• Is retirement beneficial per se?
  – more time for health promoting activities
  – more time to enjoy life

• Do retirees have more opportunities for rest and recuperation?

Effect of retirement on sleep disturbances: the GAZEL prospective cohort study

Changes in sleep after retirement

/ Jussi Vahtera, M.D., Ph.D., Finnish Institute of Occupational Health & Turku University and University Hospital
Changes in sleep after retirement by risk profile

/ Jussi Vahtera, M.D., Ph.D., Finnish Institute of Occupational Health & Turku University and University Hospital
Why do older workers sleep poorly?

- Sleep deteriorates with age
  - but it gets better when they retire
  - could constitute a vulnerability
- Worries about the next working day
- Worries about not being able to sleep
  - much less of a problem for retirees, presumably
- Stronger experience of fatigue after a poor night’s sleep
- Too wound up to fall asleep
- Poor sleep because of underlying illness
  - depression
  - pain
  - ???

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Effect of retirement on major chronic conditions and fatigue:
The French GAZEL occupational cohort study

*BMJ*, 2010;341:c6149.
Research questions

• Is retirement associated with a change in
  – the risk of incident chronic diseases?
  – the risk of prevalent depression?
  – levels of mental and physical fatigue
    • since sleep is affected
    • fatigue a common reason for disability pension
      environment
The role of work and chronic disease in fatigue

### Health condition

<table>
<thead>
<tr>
<th>Health condition</th>
<th>Synergy index (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mental fatigue</td>
</tr>
<tr>
<td>Respiratory disease</td>
<td>1.21 (1.05 to 1.40)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1.17 (0.92 to 1.47)</td>
</tr>
<tr>
<td>Coronary heart disease or stroke</td>
<td>1.85 (1.44 to 2.38)</td>
</tr>
<tr>
<td>Any chronic disease¹</td>
<td>1.30 (1.16 to 1.47)</td>
</tr>
</tbody>
</table>

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Synergy between work and Coronary Heart Disease in the association with Physical Fatigue

Relative risk with contributions from different exposure categories marked

U is the common reference category

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Can the results be generalised?

- Repeated yearly measurements in a stable cohort
  - cohort covers a broad range of occupations
  - reliable data on retirement
  - most retire at or around 55 – reverse causality unlikely

- Only self-reported chronic conditions and depression
  - check list where no tick is interpreted as no disease
  - CES-D depression only measured at four time points

- The study is based on French workers
  - retirement at an unusually young age
  - good social security (80% of salary in pension)
  - the company is a responsible employer

- Studies based on the British Whitehall II study, the Finnish Public Sector Study, and the Swedish ULF study support generalisability

- US Health and Retirement Study mixed findings
  - poorer health among older US citizens needs further study
Whitehall II data

Källa: Jokela, Ferrie, m.fl., Epidemiology, 2010;21(3):284-290.
Finnish Public Sector Study data

FIGURE 1. Prevalence of antidepressant and diabetes medication use adjusted for calendar year and retirement age, in relation to year of retirement at statutory age (error bars indicate 95% confidence intervals). Note that the figure is corrected for the increasing secular trend in prescriptions during the study period.

FIGURE 2. Prevalence of antidepressant use in relation to year of early retirement due to mental causes and physical causes separately and prevalence of use of drugs for diabetes in both these cohorts combined, adjusted for retirement age and calendar year. Error bars indicate 95% confidence intervals. Note that the figure is corrected for the increasing secular trend in prescriptions during the study period. (Note that the scale for y-axis is different than that in Fig. 1.)

Headache prevalence

Figure 1. Prevalence of headache in relation to retirement among all statutory retirees ($n = 12,913$), adjusted for time of data collection (1993–1999 or 2000–2007).

Headache prevalence: The synergy between Work and Type A (left) / Hostility (right)

## Prevalence of heavy drinking - women

<table>
<thead>
<tr>
<th>SES</th>
<th>5 years before</th>
<th>1 year before</th>
<th>1 year after</th>
<th>5 years after</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (95%CI)</td>
<td>% (95%CI)</td>
<td>% (95%CI)</td>
<td>% (95%CI)</td>
</tr>
<tr>
<td>Managers</td>
<td>17.3 (10.2 to 24.4)</td>
<td>16.7 (9.6 to 23.7)</td>
<td>24.4 (16.6 to 32.2)</td>
<td>24.4 (16.0 to 32.8)</td>
</tr>
<tr>
<td>Intermediate</td>
<td>12.0 (10.4 to 13.7)</td>
<td>11.6 (9.9 to 13.2)</td>
<td>15.8 (14.0 to 17.7)</td>
<td>13.5 (11.6 to 15.3)</td>
</tr>
<tr>
<td>Clerical workers</td>
<td>10.4 (8.5 to 12.4)</td>
<td>10.5 (8.5 to 12.5)</td>
<td>13.8 (11.6 to 15.9)</td>
<td>12.6 (10.4 to 14.8)</td>
</tr>
<tr>
<td>Difference between SES categories (p values)</td>
<td>0.09</td>
<td>0.2</td>
<td>0.03</td>
<td>0.05</td>
</tr>
</tbody>
</table>

## Prevalence of heavy drinking - men

<table>
<thead>
<tr>
<th>SES</th>
<th>5 years before</th>
<th>1 year before</th>
<th>1 year after</th>
<th>5 years after</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
</tr>
<tr>
<td>Managers</td>
<td>14.8 (13.1 to 16.5)</td>
<td>15.2 (13.6 to 16.9)</td>
<td>18.4 (16.6 to 20.2)</td>
<td>16.4 (14.6-18.2)</td>
</tr>
<tr>
<td>Intermediate</td>
<td>15.1 (14.1 to 16.0)</td>
<td>14.3 (13.4 to 15.1)</td>
<td>17.5 (16.6 to 18.4)</td>
<td>15.3 (14.3-16.2)</td>
</tr>
<tr>
<td>Clerical workers</td>
<td>17.6 (14.4 to 20.8)</td>
<td>14.9 (12.0 to 17.8)</td>
<td>19.5 (16.3 to 22.7)</td>
<td>16.7 (13.5 to 19.9)</td>
</tr>
<tr>
<td>Manual workers</td>
<td>16.7 (15.0 to 18.4)</td>
<td>15.7 (14.2 to 17.3)</td>
<td>17.1 (15.4 to 18.7)</td>
<td>16.5 (14.9 to 18.2)</td>
</tr>
<tr>
<td>Difference between SES categories (p values)</td>
<td>0.15</td>
<td>0.4</td>
<td>0.6</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Physical Activity around retirement in GAZEL

The added burden of work

- For a significant number of older workers – and these retire at 55 – working is associated with poor self-rated health
  - relieved by retirement
  - both sexes, across occupational grades…
  - exhaustion is a major problem
- Most workers can look forward to a healthy ‘third age’ beyond retirement
- Why go on working?
  - no wonder people retire earlier and earlier!

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Implications

• Widespread fatigue before retirement may
  – explain early labour market exit and decreased productivity in older workers
  – create strong opposition to raising of retirement age
  – decreased QUALY
    • the ultimate goal of society is to make good lives possible

• There is a need for job redesign and flexibility
  – reduce demands which exceed the individual’s capacity
  – utilise the particular strengths of older workers

• Future research needed to investigate
  – generalisability to other countries & settings
  – the specific causes of fatigue

• Better data needed in more countries!

© Professor Hugo Westerlund, Stressforskningsinstitutet, Stockholms universitet
Höga krav på funktioner som avtar med åldern

Försämring, t.ex. call centre operator

Kompensation, t.ex. chefskap

Ringa nytta av erfarenhet

Ingen relation, t.ex. spärrvakt

Låga krav på funktioner som avtar med åldern

Källa: Warr, 2001
Ergonomi och äldre

- Tunga lyft och snabbt arbete svårare
  - ergonomiska lösningar kan hjälpa äldre arbeta längre
- Hörsel och syn ofta nedsatt
  - väldigt olika från individ till individ
  - god ergonomi av stor betydelse för arbetsförmågan
- Det räcker inte att kunna arbeta
  - man måste också vilja, d.v.s. vara motiverad
- God ergonomi kan vara en motiverande faktor
  - ta bort mindre obehag och smärtor
  - minska fysisk och psykisk trötthet och känsla
  - öka känslan av kontroll, arbetsförmåga och produktivitet
  - satsning på ergonomi kan också uppfattas som ett slags belöning
    - rättvist och motiverande
    - hälsofrämjande enligt ERI-modellen
THANKS FOR YOUR ATTENTION!

hugo.westerlund@stress.su.se